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ABSTRACT

The challenges of making rural schools more effective vary with different types of rural conditions. But typically these challenges might include any of the following: teacher shortages, lack of facilities, isolation, HIV/AIDS and related social stigma, war crises and displaced populations, multigrade and shift teaching, administration of small schools and heavier workloads, working with local communities, difficult housing and sanitary conditions, safety concerns (particularly for female teachers and students), and resource acquisition issues. This document presents guidelines related to specific questions collected from international agency workers in rural education projects, with a focus on the African region. Topics reflect the complexity of both rural challenges and the interrelated inputs and processes associated with effective schooling. Wherever possible, examples are linked to information in the Case Study Briefs (report 3 of this series). Sections cover the developmental stages of education systems, factors that contribute to learning and educational quality, capacity for educational management, effectiveness of school leadership, alternative ways to undertake school supervision functions, impact of HIV/AIDS on education, recruiting teachers to work in rural areas, incentives for teachers, teacher resource centers, effective teacher inservice programs, training teachers for refugee situations, multigrade instruction, using interactive radio to reach remote areas, use of self-instructional materials, supplementary reading materials, language of instruction, participation of various stakeholder groups, increasing efficiency within school facilities, improving access to primary school, insufficient numbers of students, children coming from conflict situations, promoting girls education, and nomadic populations. (Contains references in each section.) (SV)

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THE WORLD BANK

HUMAN DEVELOPMENT NETWORK

Effective Schools and Teachers Thematic Group

Effective Schooling in Rural Africa
Report 4

Frequently Asked Questions About Effective Schooling in Rural Communities

December 2000

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Effective Schooling in Rural Africa
Project Reports

Report 1: Review of Phase 1 of the Program

Report 2: Key Issues Concerning School Effectiveness and Improvement

Report 3: Case Study Briefs on Rural Schooling

Report 4: Frequently Asked Questions about Effective Schooling in Rural Communities

Table of Contents

INTRODUCTION

IMPROVING QUALITY 1
Developmental Stages of Education Systems 1
The Factors that Contribute to Learning/Educational Quality 4
Educational Management 6
School Leadership 8
Alternative Ways to Undertake School Supervision Functions 10

HIV/AIDS AND EDUCATION 12
Impact of HIV/AIDS on Education 12

TEACHERS 15
Recruiting Teachers to work in Rural Areas 17
Incentives for Teachers 17
Teacher Resource Centers 19
Effective Teacher In-service Programs 21
Training Teachers for Regugee Situations 22

INSTRUCTIONAL METHODS AND MATERIALS 23
Multigrade Instruction 23
Reaching Remote Areas: Use of Interactive Radio 27
Use of Self-Instructional Materials 29
Supplementary Reading Materials 32
Language of Instruction 35

PARTICIPATION IN EDUCATION 37
Different Stakeholder groups 37
NGOs 39
Private Sector 39

SCHOOL FACILITIES 41
Increasing Efficiency Within School Facilities 41

STUDENTS 43
Improving Access 43
Children Coming From Conflict Situations 45
Promoting Girls Education 46
Nomadic Populations 49
Refugee Children 50

Effective Schooling in Rural Communities

Frequently Asked Questions

Phase One

Introduction

The challenges of making rural schools more effective are bound to vary with different types of rural conditions. But typically these challenges might include dealing with any or all of the following: teacher shortages, lack of facilities, isolation, HIV/AIDS trauma and stigma, war crises and displaced populations, multigrade and shift teaching, administration of small schools and heavier workloads, working with local communities, difficult housing and sanitary conditions, safety concerns (particularly for female teachers and students), and resource acquisition issues.

The following topics have been identified from specific questions collected from various international agency colleagues working on education projects in rural communities. While there is a focus on the African region, the information is relevant for other areas also. The topics reflect the complexity of both the challenges faced in rural conditions and the inter-related inputs and processes that tend to be associated with effective schooling. Wherever possible, links are made between the examples provided in each section with information provided in the Case Study Briefs document which is available as another resource in this series provided under the Effective Schooling in Rural Africa Program.

It is intended that as new examples and experiences come to hand, that these will be added to the work that has been started here. More will be added in the current sections, and more topics will be added in the next phase of this undertaking. Work will be available both on the website and in hard copy.

Developmental Stages of Education Systems

Guidelines:

- Education systems advance through different stages of development as resources and capacity enable.
- Projects are often designed with the final professional stage in mind. While it is good to aim for this level as the final goal, some actions at earlier stages will be needed in some systems that are not yet ready to move into this final stage.
- Since not all schools within a system are the same, there will often be variation of development stages at this level also.

The following stages compiled by Verspoor (1989) adapted from Beeby (1966, 1986) may be helpful for such planning. Many of the elements i.e. teachers, textbooks and other instructional materials, and supervision are then taken up in more detail as specific topics later in this document.

Stage One: Unskilled

Teachers:	Untrained, little mastery of subject content or teaching techniques, poorly motivated
Curriculum:	Emphasis on basics, low standards, subject content is limited, high dropout rates
Textbooks and Other Materials:	One textbook/class used by teacher, few or no materials
Teaching Techniques:	Recitation, rote learning, memorization, students copy from chalkboard
Supervision:	Limited to control and compliance with regulations
Teacher Reaction to Innovation:	Ignorance, confusion, doesn't apply innovations/ changes
Possible Changes:	Provide structured teachers' guides, textbooks and minimal instructional materials Provide teacher training in subject matter and basic teaching techniques Provide teachers with opportunities to understand need for improvement

Stage Two: Mechanical

Teachers:	Lower secondary education, little professional training, some in-service training
Curriculum:	Highly structured, standards are set by examinations, high rates of repetition
Textbooks and Other Materials:	One or two textbooks for each student in main subjects
Teaching Techniques:	Memorization, curriculum strictly followed, short-term activities/objectives
Supervision:	Emphasizes compliance and standardized use of curriculum and teaching materials
Teacher Reaction to Innovations:	Uncertain, innovations are adapted to personal/professional capacity/motivation
Possible changes:	Broaden the curriculum Increase training in subject area mastery and introduce simple teaching techniques Teacher guides/textbooks set standards that are enforced by exams Increase teacher confidence through training/school-level support

Stage Three: Routine

Teachers:	Secondary education with training, subject area mastery, some

	contact with colleagues
Curriculum:	Broader goals, opportunities for adaptation/experimentation exist, concern with prevention of failure
Textbooks and Other Materials:	Several textbooks available, small school library, selective use of textbooks
Teaching Techniques:	Increasing attempts to introduce "learning by doing", more goal oriented planning, tracking
Supervision:	More frequent supervision and in-service emphasizing teaching
Teacher Reaction to Innovations:	Will try to adapt innovation to make classroom management easier
Possible Changes:	Focus on teaching for understanding Promote flexibility and diversity in curriculum Develop broader objectives to include emotional/creative development of students Encourage professional exchange between teachers

Stage Four: Professional

Teachers:	Well-educated/trained, read professional publications, interested in improving student performance
Curriculum:	Emphasizes meaning/understanding, variety in content and methods, considerable attention to emotional and creative development of students
Textbooks and Other Materials:	Broad availability of textbooks, supplementary materials, well-supplied school library
Teaching Techniques:	Ability to investigate new ideas, longer term planning to adapt curriculum/materials to student needs, individualized and group instruction
Supervision:	Training emphasizes professional skills development, principal is source of pedagogical support
Teacher Reaction to Innovations:	Focus on student needs, willing to try/test alternative approaches, able to master and adapt innovations to particular groups of students
Possible Changes:	Innovation is a permanent feature Teachers behave and perceive themselves as professionals

References:

Beeby, C. (1966). *The Quality of Education in Developing Countries*. Cambridge, MA: Harvard University Press.

Beeby, C. (1986). "The Stages of Growth in Educational Systems". In S. Heyneman and D. Sienv White (eds.) *The Quality of Education and Economic Development*, pp 37-44. A World Bank Symposium. Washington DC: World Bank.

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press.

Verspoor, A. (1989) *Pathways to Change: Improving the Quality of Education in Developing Countries.* Washington DC: World Bank Discussion Paper No. 53.

The Factors That Contribute to Learning/Educational Quality

Guidelines:

- The term quality is used in different ways when referring to educational improvement. It is often used to refer to:
  - characteristics of the factors that go into the education process
  - aspects of the process itself, and/or
  - the outcomes of the process (McGinn and Borden, 1995).

- It is possible to know when the quality of education improves by the detectable gains in the knowledge, skills and values acquired by students that occur when there is improvement in the student learning environment (Ross and Mahlck, 1990).

- The following framework (Heneveld and Craig, 1996) identifies the key factors, both inputs and processes, of that student learning environment.

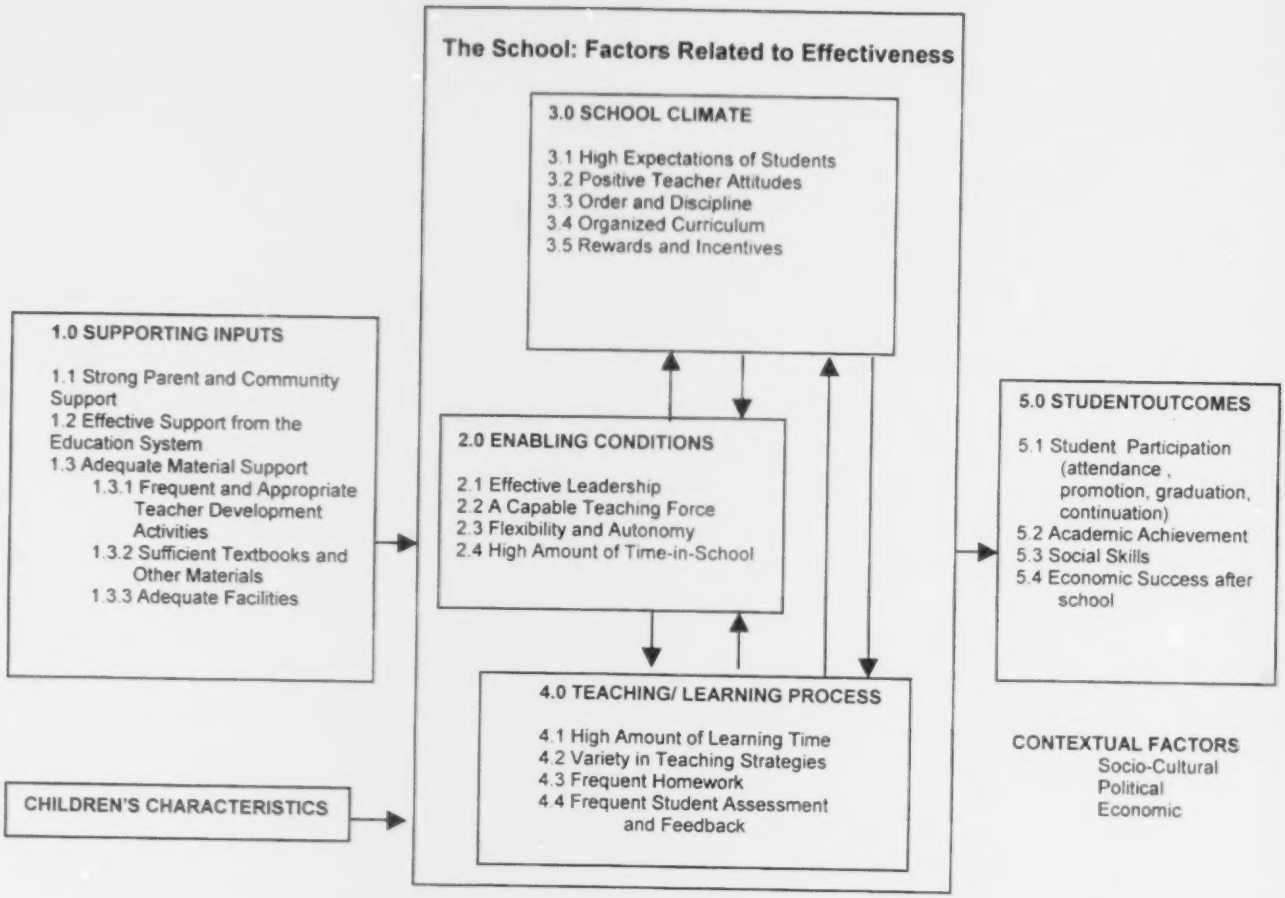
  It is important to first identify what learning outcomes are required. Then prioritize the changes needed to develop the learning environment to achieve these outcomes.

  There are three main points about this framework to help avoid accepting these factors as a checklist of isolated characteristics that are "good":

  - The school is the main locus for making education effective.

  - All the factors are mutually reinforcing- how they interact with each other is as important as their presence.

  - The proper mix of these factors and how they are nurtured and reinforce each other in a particular setting depends on the context in which the school operates.


The School: Factors Related to Effectiveness
3.0 SCHOOL CLIMATE
3.1 High Expectations of Students
3.2 Positive Teacher Attitudes
3.3 Order and Discipline
3.4 Organized Curriculum
3.5 Rewards and Incentives
1.0 SUPPORTING INPUTS
1.1 Strong Parent and Community Support
1.2 Effective Support from the Education System
1.3 Adequate Material Support
1.3.1 Frequent and Appropriate Teacher Development Activities
1.3.2 Sufficient Textbooks and Other Materials
1.3.3 Adequate Facilities
2.0 ENABLING CONDITIONS
2.1 Effective Leadership
2.2 A Capable Teaching Force
2.3 Flexibility and Autonomy
2.4 High Amount of Time-in-School
5.0 STUDENTOUTCOMES
5.1 Student Participation (attendance, promotion, graduation, continuation)
5.2 Academic Achievement
5.3 Social Skills
5.4 Economic Success after school
4.0 TEACHING/ LEARNING PROCESS
4.1 High Amount of Learning Time
4.2 Variety in Teaching Strategies
4.3 Frequent Homework
4.4 Frequent Student Assessment and Feedback
CONTEXTUAL FACTORS
Socio-Cultural
Political
Economic
CHILDREN'S CHARACTERISTICS

References:

Heneveld, W. and Craig, H. (1996) "*Schools Count: World Bank Project Designs and the Quality of Primary Education in Sub-Saharan Africa*: Technical Paper 303, Africa Technical Department Series. World Bank.

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press

Ross, K.N. and Mahlck, L. (1990). *Planning the Quality of Education: The Collection and Use of Data for Informed Decision-Making.* Paris: UNESCO/Pergamon Press.

Educational Management

Guidelines:

- Three broad tasks have been proposed to improve the capacity of countries to manage their education systems:
  - improve organizational processes and structures
  - increase managerial capacity
  - develop effective information systems (Lockheed and Verspoor, 1991)

- Key elements of sound educational management include:
  - Annual goals to be clearly stated and understood by the various members of the organization.
  - Tasks and functions of different units within the administration to be clearly defined.
  - Good communication both vertically and horizontally between units.
  - Planning to be directly related to actual operations, especially those that support improved student learning.
  - Monitoring and evaluation mechanisms to be established so actions can be reviewed annually and changes made where necessary.
  - Special training to accompany appointments, especially where tasks are new.
  - Sufficient funding to allow close contact with districts and schools, so decisions can be made on the actuality of the school situation.
  - Management plans now need to consider the impact HIV/AIDS on both the formal and nonformal education sectors.

- Factors that affect the implementation of policies and programs as summarized by McGinn and Borden, 1995, include:
  - *Organizational information*: Implementation requires two kinds of information. At the beginning of the process, analysts and planners must have some knowledge or understanding of whether a new policy is feasible, and whether it is desirable. Managers also require information during the implementation of the policy in order to work out faults in the design that could lead to failure.
  - *Sense of ownership*: Policies and programs are more likely to be implemented when those involved believe in what they are doing. This belief is generated by participation in the process of defining the policy issue and designing a solution.
  - *Tasks and technology*: It must be possible to carry out the policy, which is to say that the means to do so must be known. Clarity about what is expected, is essential as is ability.
  - *Management and organization*: Implementation takes place within an organizational context, and requires sustained management capability.
  - *Culture*: Implementation also takes place in a cultural context. It's often recommended that new proposals must not deviate too much from existing norms and beliefs about what can and should be done.
  - *Politics:* Implementation takes place in a political context. Most changes of any consequence affect the balance of power among groups, and therefore have important political considerations. Reforms that are contrary to the prevailing powers are likely to fail.

- *Implementors*: The major reason why plans fail and policies are not implemented faithfully is because those responsible for their implementation are not aware of what is expected of them, are not convinced that they should do what is asked, or are not able to do what is asked.
- *Clients:* Plans and policies are more likely to be implemented when there is a clearly defined set of stakeholders, beneficiaries, or clients. These may be parents, the community-at-large, or employers. Clients help provide resources, as well as motivation to implementers.
- *Resources:* Plans fail when they are not adequately financed, or if required resources are not mobilized from client groups.
- *Benefits of the policy*: Policies and plans are implemented over time, generally in stages. If obtained results are less than expected, or if costs are much higher than promised, or if much more effort is required than was thought, then clients and funders and implementers may reduce their support. The program may die, or be killed, before it becomes fully institutionalized.

Examples:

Bangladesh:	BRAC and GSS schools (see c.s. briefs 10 and 11)
Colombia:	Escuela Nueva (see c.s. brief 15)
Guatemala:	Nueva Escuela Unitaria (see c.s. brief 16)
Philippines:	the IMPACT project (see c.s. brief 13)
Thailand:	The Reduced Instructional Time project for teacher shortage in rural areas

References:

Lewin, K. (1988). " Perspectives on Planning: Initiatives for the '90s" *Educational Review* 40(2), pp. 175-183.

Lockheed, M. and Verspoor, A. (1991). *Improving Primary Education in Developing Countries: A Review of Policy Options*. Oxford: Oxford University Press.

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press.

Verspoor, A. (1989) *Pathways to Change: Improving the Quality of Education in Developing Countries.* Washington DC: World Bank Discussion Paper No. 53.

Warwick, D.; Reimers, F. and McGinn, N. (1991) cited in McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press.

Wheeler, C.; Raudenbush, S. and Pasigna, A. (1989). *Policy Initiatives to Improve Primary School Quality.* Cambridge, MA: Harvard Institute for International Development, BRIDGES Research Report No.5.

School Leadership

Guidelines:

- School leadership ranks one of the highest factors to make a difference to student learning.

- While it is partly reliant on the personal characteristics of the individual, many of the skills can be developed and nurtured. But there is no one model to be learned and applied, regardless of culture or context. And the leadership is beyond the valiant undertakings of the single person.

- School leadership is not static. Effective school leaders are often rule breakers and are willing to change in response to new sets of circumstances, and the differing needs of children, young people and teachers.

- Effective school leaders exercise both their professional and political leadership. e.g. seeking alliances, deciding on courses of action, and drawing on their own beliefs and judgments to make decisions about the use of resources.

- The four key areas that school leaders/Heads influence their schools are through:
  - establishing and conveying the purposes and goals of the school.
  - the interplay between the school's organization and its social networks. Highly effective Heads tend to promote participation in decision-making, networks and interactions between staff, and the involvement of parents.
  - people. Effective Heads foster group goals and model their desired behavior for others by providing intellectual stimulation and support for staff, both personally and through staff development.
  - organizational culture. School leaders operate within an environment but also influence how others perceive that environment and interpret events.

- More specifically, school leadership is effective when:
  - The Head sees that the resources are available to provide adequate support to teachers, sufficient learning materials, and an adequate and well-maintained learning facility.
  - The Head actively pursues high instructional standards by:
    - Clearly and frequently stating in concrete terms the school's mission, curricular goals and expected teaching behaviors
    - Clearly and frequently expresses high expectations of pupils and staff and the school's focus on learning as its central purpose
    - Coordinating and managing the learning process.
  - The Head communicates regularly and effectively with teachers, with parents and others in the community.
  - The Head maintains high visibility and accessibility to pupils, teachers, parents and others in the community.

Examples:

India:	Lok Jumbish (see c.s. brief 14)
Guinea:	Small grants program (see c.s. brief 1)
Palestine:	School review and development (see c.s. brief 20)
South Africa:	Creating partnerships (see c.s. brief 7)
Sri Lanka:	Management initiative

References:

Heneveld, E. and Craig, H. (1996) "*Schools Count: World Bank Project Designs and the Quality of Primary Education in Sub-Saharan Africa*: Technical Paper 303, Africa Technical Department Series. World Bank.

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press

Riley, K. (2000). "Leadership, Learning and Systemic Reform" *Journal of Educational Change*, 1:29-55.

Riley, K. and MacBeath, J. (1998). "Effective Leaders and Effective Schools". In J. MacBeath (ed). *Effective School Leadership: Responding to Change*. London: Paul Chapman.

Riley, K. (1998). *Whose school is it anyway?* London: Falmer Press

Riley, K. (1998). "Creating the leadership climate". *International Journal of Leadership in Education* 1(2), 137-153 (Summer, Taylor and Francis).

Alternative Ways to Undertake School Supervision Functions

Guidelines:

As stated by McGinn and Borden (1995:193):

- Supervision (or inspection) typically involves the monitoring of the behavior of school directors, teachers and students. It usually is intended to perform one or more of the following functions:
  - *Insure compliance with system policies, rules and regulations.* This includes correct use of the official curriculum, proper handling of community funds, and attendance. This assumes that compliance with the plan will ensure achievement of system objectives.

This function for supervisors can be made unnecessary by the introduction of a system of performance-based management. In this system, the central ministry monitors the performance of teachers by use of standardized tests of achievement. Attention is paid to schools, directors, and teachers whose students perform at a level below what is expected. What is important is whether goals are achieved.

- *Collect data about system performance.* This includes routine statistical information, director and teacher comments on curriculum and instructional materials, vacant positions, repair of buildings etc. This objective was originally intended to permit central management to make critical decisions, but could also contribute to a decentralized management system.

This second function can be supplanted by the improvement of current systems for collection, analyses, and utilization of information. Information becomes the responsibility and concern of all participants in the system. In some cases there is a special officer who is responsible for making the system work, but she/he has no supervisory functions.

- *Provide guidance and training to school directors and teachers in order to improve their performance.* This objective is consistent with decentralization of management, and makes the supervisor part of the in-service training team.

This is the most important function of supervisors. If the program provides other ways for teachers to get information about their performance, and to learn new methods of teaching, then supervisors are not necessary. This might occur if the principal is trained as an instructional leader and trainer of teachers, peer coaching relationships between teachers, school-based mentors, twinning community and rural schools with urban well off schools to share experiences and resources, or through visits of a resource teacher/professional facilitator who works alongside classroom teachers on an itinerant basis.

Examples:

Lesotho:	District Resource Teachers Program (see c.s. brief 3)
Pakistan:	Conversion of one-teacher schools to two-teacher schools to provide greater support to teachers
Pakistan:	Introduction of supervisory staff to help teachers improve instruction
Palestine:	Establishing school-based systems for school review and development (see c.s. brief 20)
Sri Lanka:	Cluster system to support teachers
Papua New Guinea:	Cluster system to support teachers
Uganda:	The plans for establishing an Education Standards Agency (ESA) in Uganda from April 2001 are aimed to ensure inspection and reporting on each of the areas of curriculum; pupil attainment; learning and teaching; support for pupils; school ethos; resources, facilities and

staff; management, leadership and quality assurance. An important feature is to feed back advice and comment to individual schools, district officers and teacher educators

References:

Bray, M. (1987) *School Clusters in the Third World: Making Them Work.* Paris: UNESCO-UNICEF Cooperative Programme.

Cummings, W.; Gunardwardena, G. and Williams, J. (1992). *The Implementation of Management Reforms: The Case of Sri Lanka.* Cambridge, MA: Harvard Institute for International Development, ABEL/USAID report.

Le Czel, D.K (1989) *The District Resource Teachers Program in Lesotho*

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press

O'Grady, B. (1996). *District Resource Teachers Program Lesotho: An Interview with Gerard Mathot,* Former Coordinator. Some of the text in this Brief is directly excerpted from this reference.

Warwick, D. Reimers, F. and McGinn, N. (1992). "The Implementation of Educational Innovations: Lessons form Pakistan". *International Journal of Educational Development*, 12(4), 297-307.

Wheeler, C.; Raudenbush, S. and Pasigna, A. (1989). *Policy Initiatives to Improve Primary School Quality.* Cambridge, MA: Harvard Institute for International Development, BRIDGES Research Report No.5.

HIV/AIDS and Education

Impact of HIV/AIDS on Education

Guidelines

HIV/AIDS is exacting a heavy toll on education systems in many ways.

- *Key areas of concern*: Several urgent areas raised in more recent forums include:
  - the slowness of ministries and international agencies to recognize and respond to the severity of the HIV/AIDS pandemic as it devastates education systems;
  - difficulty in obtaining accurate data to determine the impact of HIV/AIDS on the education system including: trauma, stigma and death of teachers, managers, administrators, and children in vulnerable groups; loss of organizational and management capacity; and macroeconomic, household and other costs and their effects on communities and the larger country;
  - difficulty in not being overwhelmed with the trauma, to maintain a sense of hope and proactive purpose, and to re-energise personnel;
  - lack of resources and capacity to gather routine system data (both quantitative and qualitative);
  - lack of resources and capacity to aggressively design, implement and monitor interventions and to work to prevent new infection;
  - the need to think of different educational and supportive structures, particularly at the local level, but within a national public campaign to combat and cope with the HIV/AIDS impact; and
  - while there is a lot of information still needing to be collected to give a more accurate understanding of the impact of the pandemic, sufficient is known to mobilize actions. A parallel approach of gathering further accurate information, as well as implementing and monitoring new measures is needed.

- *Areas of impact:* HIV/AIDS seems to have greatest impact on four main areas of the education sector.
  - It affects education from a **demand** point of view – there is less demand on the current formal system because there are fewer children seeking to enter or stay in the education system. This is due to the following: there are fewer children born, there are greater numbers of sick children; more children are unable to attend school for economic reasons; and more children must leave the education system due to changed familial, social, and economic circumstances.

  - The capacity of the education system to **supply** schooling services also decreases. This is because large numbers of teachers and other staff may become infected, resulting in impaired performance and high attrition rates in the system. In addition, as the impact of HIV/AIDS is felt on the productive sector of the economy and the health budget,

government revenues will decline and/or be reallocated – resulting in a smaller education budget. The overall dealing with wide spread trauma can also overwhelm individuals and communities. The nonformal education system will play an increasingly important role to help provide meaningful educational services to children, especially to vulnerable groups such as girls, orphans and out-of-school youth affected by trauma and stigma.

- The **quality of education** is also affected negatively by this phenomenon. There are fewer teachers working; they may be less motivated and affected by family trauma or illness themselves; and many families experience decline in purchasing power, making the acquisition of books etc. harder. In addition, reductions in the education budget are most likely to affect non-salary expenditure – resulting in less teaching input. Loss of central and provincial administrators/managers, experienced teacher mentors, and teacher educators in universities and colleges also affects the quality of planning, training, and support.

- **Equality of opportunities** will most likely be affected negatively. Due to biological and social factors, female students seem to be adversely affected sooner than male students. School safety, social stigmas and lack of empowerment issues are increasingly concerning for girls in the current formal school system. In addition, disadvantaged groups will have fewer resources on which to call in order to confront the pandemic and its effects, resulting over time in a more direct relationship between poverty and HIV/AIDS prevalence.

- The challenge that countries affected by the pandemic face is how to protect both the formal and nonformal education system from its ravages, and simultaneously adapt to the new needs that the context has created.

- *Recommendations:* A foundation for action needs to be put in place to enable mobilization to occur. Key elements include:
  - secure committed and informed leadership for a long term national programme across sectors;
  - obtain further accurate information for what's happening in the system, to whom, and under what circumstances;
  - analyse the information and have it feed into the decision-making process;
  - share information extensively to various groups in ways that can be easily understood;
  - develop consensus where possible within education departments – central and regional, and with the help of local practitioners;
  - establish necessary structures and processes within the system - HIV/AIDS initiatives need to be integrated across all core functions of the education sectors, formal and nonformal;
  - establish needed personnel policies for those infected and affected by HIV/AIDS;

- mobilize resources - get dedicated flexible budget lines within Ministry programmes to put resources where and when they are most needed in local administrations and with NGOs, and partner with funding agencies to get additional resources; and
- strengthen partnerships between groups including politicians, government officials, NGO and institutional activities, churches, academics, the media, unions, parent and teacher associations, local leaders and funding agencies. Listen to what teachers and district officials have to say about what needs to be done, how it can be done, and what they need to do.

Examples:

Botswana:	food baskets for orphans and trying to keep siblings together wherever possible.
Kenya:	FAWE support for nonformal education initiatives to help young women learn life skills
Malawi	community awareness campaigns
South Africa:	many initiatives including new policies for single sex schools, reduction of age range within existing co-ed classrooms, routine anonymous testing of teachers and learners for STDs and HIV/AIDS etc.
South Africa:	piloting of HIV/AIDS toolkit for district level managers
South Africa:	schools in Guateng province that draw up AIDS prevention plans are given a financial incentive of 1,000 Rand
Uganda:	strong political support, public dialogue, use of media, wide mobilization, national program with many local initiatives
Zambia:	financial assistance to stay in school for female headed households, interactive radio programs, and community schools not requiring school uniforms or fees to help lower costs.

References:

Badcock-Walters, P. and Whiteside, A. (2000) *Planning for Practical HIV/AIDS Interventions in Education*

Carr-Hill, R., Katabaro, J.K., and Katahoire, A. (September 2000) "HIV/AIDS and Education" (draft). Paris: IIEP/UNESCO.

Cohen, D. (August 2000). "Evaluating HIV and AIDS: Why Capacity Development is Central to Assessing Performance". UNDP.

Coombe, C. (July 2000). "Managing the Impact of HIV/AIDS on the Education Sector"

Coombe, C. (2000). "Numbers and the /AIDS effect"

Johnson, S. (2000) "The impact of HIV/AIDS on the education sector in South Africa"

Kadzamira, E. and Swainson, N. (2000). "The Impact of HIV/AIDS on Education" [Malawi, Botswana and Uganda]

Kelly, M.J. (2000) "Children in primary school: the window of hope or the window of concern?"

Kelly, M.J. (September 2000) *Planning for Education in the Context of HIV/AIDS.* Fundamentals of Educational Planning Series, No. 66. Paris: IIEP/UNESCO

World Bank (August, 2000). "Exploring the implications of the HIV/AIDS epidemic for educational planning in selected African countries: the demographic question."

Recruiting Teachers to Work in Rural Areas

Guidelines:

- Many countries find it difficult to staff rural schools. The reasons (summarized by McGinn and Borden, 1995) include:
  - a perceived lack of physical amenities and cultural attractions in rural areas;
  - actual or perceived higher costs of teaching in rural areas, as these affect immediate income or opportunities for future advancement;
  - ethnic, racial or linguistic differences between inhabitants of urban and rural areas that discourage urban candidates;
  - the failure of rural schools to graduate enough persons to supply teachers for rural schools; and
  - cultural taboos, more easily enforced in rural areas, against single women living alone.

- The work of Gibson (1994) on preparing teachers for rural education suggests that there is a need for specialized programs of teacher preparation to help deal with issues of isolation, multigrade teaching techniques, working within local community expectations, familiarity and cultural differences, possible difficult working conditions, and safety issues particularly for female teachers.

- There is also a need for staff practices and policy guidelines in departments of education to reflect national policies to appoint such teachers only after they are provided with adequate training and support.

- The absence of female teachers in rural areas is a barrier to girls' enrollment, particularly in countries where religion requires seclusion of women and parents allow girls to attend only single sex schools with female teachers. One way to increase female teacher supply especially in rural areas is to provide training and posting of these teachers close to their home bases. Both Pakistan and Nepal placed teacher training institutes in rural areas, provided mobile teacher training in some cases, actively recruited females from the particular area where teachers were needed, and after training, placed these graduates near their homes.

- The use of advance coaching to potential female teacher-trainees has proven useful in some communities. Female teachers provide crucial role models to the girls and also encourage parents to send their daughters to school.

- Affirmative action can be used to increase the number of female teachers.

- Training for both male and female trainees received gender sensitive and gender responsive. It is noted that the high incidence of HIV/AIDs together with gender violence affects teachers, parents and pupils. Many parents fear to send their daughters to schools that are male dominated. Increasing female teachers and the number of same sex schools will help to raise girls' enrolments as well as lessen the opportunity for transactional sex resulting in possible HIV infection or inappropriate and sometimes abusive relationships between pupils, and between teachers and pupils.

- Incentives are also important to attract and retain teachers in rural areas. See the following section on incentives.

Examples:

Australia:	preparing teachers for rural areas
Eritrea:	advance coaching to potential female teacher-trainees
Nepal:	recruiting and retaining female teachers
Pakistan:	recruiting and retaining female teachers
Sierra Leone:	Bunumbu Teachers College training for rural teachers
Thailand:	The reduced instructional time project for teacher shortage
Uganda:	Teacher Development Management System (see c.s. brief 9)

References:

Ankrah-Dove, L. (1982). "The Deployment and Training of Teachers for Remote Rural Schools in Less Developed Countries." *International Review of Education* 28(1), pp 3-27.

Gibson, I. (1994). "Preparing Teachers for Rural Education Settings in Australia: Issues of Practice and Quality". Paper presented at the Annual Meeting of the American Education Research Association, New Orleans.

King, E. and Hill, M.A (Eds.) (1990). *Women's Education in Developing Countries: A Review of Barriers, Benefits, and Policy.* Washington, DC: The World Bank

Office of Education. Bureau for Science and Technology (1990). *Lessons Learned in Basic Education in the Developing World.* Washington DC: USAID

Thiagarajan, S. and Pasigna A. (1988). *Review of the Literature of the Soft Technologies of Learning.* Cambridge: Harvard Institute for International Development. BRIDGES Research Report No. 3.

UNICEF education project documents: including Eritrea.

Wheeler, C. Raudenbush, S. and Pasigna, A. (1989). *Policy Initiatives to Improve Primary School Quality.* Cambridge, MA: Harvard Institute for International Development, BRIDGES Research Report No.5.

Incentives for Teachers

Guidelines:

- Kemmerer (1990) defines the term "incentives" as all the direct and indirect benefits offered to teachers as intrinsic motivators. More specifically, he states that *direct monetary benefits* are the package of teacher salary, allowance and fringe benefits; *indirect monetary benefits* are all the other financial resources offered to teachers. These might include: i) professional support such as initial and ongoing training programs, teacher guides, textbooks, instructional supervision, and ii) personal support such as free or subsidized housing, food or transportation. *Nonmonetary benefits* include professional status in the community, location or teaching position, recognition and approval by significant people associated with the teacher etc.

- However different incentives work for different people at different stages of their careers. It is important to look at each community and its teachers and to find out what would make a difference for these individuals to improve their teaching as well as their career satisfaction. These incentives should be appropriate to the needs of the teachers, and be compatible with both resources available as well as the expectations from teachers' unions and other professional associations. Several countries provide incentives such as salary differentials, transportation funds, extra vacation time for traveling long distances, bicycles, or housing to encourage teachers to work in isolated rural areas. Research has not been able to document a clear connection between these incentives and student achievement, but such a relationship would be extremely difficult to isolate. However, logic would tell us that having a teacher regularly present in a rural classroom is considerably more beneficial to student achievement than having no teacher at all.

- Some suggestions though for improving the instructional skills of teachers, some of which have monetary implications, are to provide:
  - release time to observe and work with peers in one's own school as well as in other schools or districts;
  - release time for ongoing inservice programs;
  - additional planning or preparation time for teachers; and
  - institutional support for teachers (induction programs, ongoing support and guidance, rewards, providing instructional materials, providing orientation programs to the school/new community) particularly in the first few years of teaching.

Specifically on teacher remuneration issues, some suggestions include:

- Diversify training requirements and salary scales for teachers at different levels: establish what credentials are necessary for teachers of learners at various stages (pre-school, primary school, secondary school, tertiary institutions, teacher education, special education) and train, appoint and pay according to those credentials.

- Establish an institutional framework to handle the unique problems of teachers e.g. a Teachers Service Commission Council, a recognized collective bargaining mechanism, which would allow for the negotiation of realistic economic levels of remuneration for teachers commensurate with prevailing economic conditions as well as considerations of quality education.
- Promote teachers' cooperatives and suitable investment arrangements to supplement teachers' pay: governments will typically not have sufficient money to pay teachers an economic wage.
- Allocate greater resources to non-salary inputs by rationalizing the proportion of education budgets assigned to salaries, and that assigned to other teaching/learning resources (education facilities, equipment and textbooks).

Examples:

Ghana:	There is an award for the "Best Teacher" at national, regional and district levels. Such rewards range from cars to mobylettes, TV sets, bicycles to certificates of merit. This has led to competitive work among teachers.
Guinea:	Small Grants Program (see c.s. brief 1)
Malawi:	Supporting Teacher Development (see c.s. brief 5)
Sierra Leone:	Training for rural teachers had been introduced at Bunumbu Teachers College. The training was also coupled with remote area allowances as part of an incentive structure, but this became problematic because of devaluation of local currency and delayed payments.

References:

Chapman, D.; Snyder, C. and Burchfield, S. (1993). "Teacher Incentives in the Third World" *Teacher and Teacher Education* 9 (3):301-316.

Dembele, M. and Bender, P. (1999) "Small grants as a catalyst for system wide focus on quality improvement in primary education in Guinea" A paper presented at the annual conference of the Comparative and International Education Society. Toronto.

Kay, J. (2000) "Supporting teacher development in primary schools (Malawi)" in Saunders, L. (Ed.) *School Improvement Worldwide: Nine Case Studies from Six Countries.* Manchester: British Council.

Kemmerer, F. (1990). "An Integrated Approach to Primary Teacher Incentives". In *Improving Educational Quality: A Global Perspective.* Westport, CT: Greenwood Press.

Lockheed, M. and Verspoor, A. (1991). *Improving Primary Education in Developing Countries.* Oxford: Published for World Bank by Oxford University Press.

Teacher Resource Centers

Guidelines

Few resource centers have worked well to help teachers improve their classroom instruction. However, those programs that have had good impact on teacher instructional performance tend to have had visiting district resource teachers either instead of a stand alone resource center structure or in conjunction with one.

Successful resource centers (and school clusters in general) tend to address many of these issues:

- Common agreement about clearly stated objectives of the resource center is reached between the schools.
- The topography of the areas to be covered allows easy access to the centers –the ease or difficulty of communication and transportation, time, physical weariness and cost is considered.
- There is support and collaboration of participants involved in the cluster.
- There is participatory planning and implementation between staff from the cluster schools.
- There is support and collaboration of education officers higher up in the education system.
- The activities undertaken at the resource center have a strong application to classroom practice.
- The skills of the people responsible for the teaching, training, mentoring and support from and to the center are adequate.
- There are outreach programs with personnel that visit the other schools in conjunction with programs/services offered at the main resource center.
- There is sufficient release time for staff to attend the center in school hours.
- There are incentives in place to attract staff to use the center.
- There are adequate resources and equipment at the center and for outreach staff.
- There is additional staffing to manage the center. The additional staffing is feasible and affordable.
- The costs and benefits of resources are shared in the cluster – financial and nonfinancial.

Examples

Colombia:	Microcenters (see c.s. brief 15)
Lesotho:	The District Resource Teacher Program (see c.s. brief 3)
Kenya:	Teacher Advisory Centers (supporting primary level teachers) and Teacher Resource Centers (supporting secondary level teachers)
Nepal:	Resource Centers (supporting primary level teachers) and Secondary Education Development Units (supporting secondary teachers)
Papua New Guinea:	Education Resource Centers
Uganda:	Teacher Resource Centers (see c.s. brief 9)
Zambia:	Teacher Resource Centers (supporting primary and junior secondary level teachers)

References:

Bray, M. (1987) *School Clusters in the Third World: Making Them Work.* Paris: UNESCO-UNICEF Cooperative Programme.

Craig, H.; Kraft, R. and du Plessis, J. (1998). *Teacher Development: Making an Impact.* Washington DC. :ABEL/USAID and World Bank

Knamiller, G. (Ed.) (1998). *The Effectiveness of Teacher Resource Center Strategy.* London: Department for International Development.

Le Czel, D.K (1989) *The District Resource Teachers Program in Lesotho*

O'Grady, B. (1996). *District Resource Teachers Program Lesotho: An Interview with Gerard Mathot,* Former Coordinator.

Effective Teacher Inservice Programs

Guidelines

Essential elements of teacher inservice programs typically:

- focus on concrete and specific training for instructional and management practice;
- are appropriate to the current needs of the teacher;
- involve teachers and other staff in the planning and implementation of both short and long term activities;
- include a balance of theory and practice;
- include small group workshops, peer observations and feedback, coaching, and instructional demonstrations;
- ensure implementation in the classroom of the acquired learning;
- provide continuous guidance and support (headteacher, peers and other staff);
- have the support and participation of the head teacher and other school leaders;
- enable participation through release time;
- provide regular meetings through release time;
- provide regular meetings with other teachers for problem solving;
- fit within the context of the local community and school culture; and
- fit within the broad, long-term professional development and school improvement program.

Examples:

Australia:	Long term professional development programs for science
Colombia:	Escuela Nueva (see c.s. brief 15)
Egypt:	School-based training for English Teachers
Lesotho:	District Resource Teachers Program (see c.s. brief 3)
Malawi:	Supporting Teacher Development (see c.s. brief 5)
Guatemala:	Nueva Escuela Unitaria (see c.s. brief 16)
Guinea:	Small Grants Program (see c.s. brief 1)
Mexico:	Compensatory Program to Address Educational Lag (PARE)
Pakistan:	Mobile teacher training, and field based programs
South Africa:	READ program (see c.s. brief 8)

References:

(based on the work of Andrews, et al. , 1990; Esu, 1991; Dempsky, 1997, 1994; Dove, 1982; Griffin, 1983; Hutson, 1981; Joyce and Showers, 1980; Lawrence, 1974; Lockheed and Verspoor, 1991; Loucks and Zigarmi, 1981; National Center for Research on Teacher Learning, 1991; Orlich, 1983; Mosenthal and Ball, 1992; Schiefelbein, 1992; Tatto, 1997; and Tatto et al., 1993; and Van Tulder and Veenman, 1991) cited in:

Craig, H.; Kraft, R. and du Plessis, J. (1998). *Teacher Development: Making an Impact*. Washington DC: ABEL/USAID and World Bank.

Guidelines:

Further information is needed in this area. However, in addition to the information in the sections on "Students: Refugee populations", and "Inservice Teacher Training", two guidelines to consider are:

- recruit adults (or teenagers if necessary) with the same linguistic and cultural background to provide instruction; and
- if crash courses for basic teaching skills and content occur, place strong emphasis on ongoing classroom support for these teachers.

Example:

Refugees began arriving in Somalia from Ethiopia in 1977. By 1981 there were estimated to be 700,000 refugees in Somalia. Many of these children were of school age. Somalia, meanwhile, was having a hard time providing schooling to its own children. About one-third of the age-group was enrolled in primary schools and there were not enough trained teachers.

To respond to the refugee crisis, the Somali Government, together with UNHCR, established an Institute of Inservice Teacher Training (IITT). The Institute was modeled on the UNRWA/UNESCO Institute of Education in the Middle East, established for Palestinian refugees. Teenage or older refugees who have completed primary schooling are recruited. They are given a crash course in teaching, and placed in classrooms. Weekly seminars held locally are used to upgrade their teaching abilities. Correspondence courses are used to increase knowledge of subject matter.

Within its first year, the IITT was able to establish schools in nearly all the camps. By 1988 the IITT was providing schooling to about 40,000 students per year. More than 1,000 teachers were trained. Since that time an administrative structure has been built which is continuing and expanding the operation.

References:

Dodds, Y. (1986). *Refugee Education: The Case for International Action.* Cambridge, UK: World University Services.

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press (some of the text is excerpted from this reference).

Multigrade Instruction

Guidelines:

Multigrade teaching (also called 'composite classes', 'multilevel', 'vertical grouping', 'family grouping' or 'unitary schools' or 'one teacher schools') refers to the teaching of students of different grades, ages and abilities in the same group. Some communities prefer multigrade classrooms and are specifically adopted for pedagogical reasons.

Effective multigrade teachers (according to Rowley, 1992, cited in McGinn and Borden, 1995):

- group students by ability, according to the particular subject matter. In resource-poor classrooms, the teacher spends more time with slower students. Advanced students work alone or in small groups. In richer settings, students work in activity settings, reading corners or libraries.
- give less class time to direct instruction (e.g. lecturing). They give more time to student-led discussions, or individual or group exercises. Where possible, students work on workbooks or exercise sheets, or other individualized materials. More advanced students are used to help slower students while the teacher attends to another group. This method works well when lessons are carefully sequenced. Teachers often break up the day into units with well-defined objectives, and frequently test for student understanding. Student motivation is often maintained by linking exercises to the local situation, and by frequent rewards for progress.
- recognize that some subjects can be taught to the whole class e.g. art, health, literature. Other subjects such as mathematics and reading are better taught in small groups (Pratt and Treacy, 1986).
- recognize that heavy dependence on the textbook as the course of the curriculum reduces the effectiveness of multigrade teaching. Effective teachers in multigrade settings adapt objectives, content and methods to match the current knowledge, abilities, and interests of different groups of students. Multigrade teaching requires flexible presentation of information, varied across groups, and according to subject. Instructional design approaches need to take into account differences of interests and rates of learning of students of different ages.
- use student self-instructional materials and supplement their programme with methods such as interactive radio where they are available.

With multigrade classrooms, research indicates that students can learn as much as in single grade classrooms. The added benefit of well designed multigraded classrooms is the superior social dimension of learning. But the additional inputs often needed in successful multigrade classrooms, cited by Little, (1995), include:

- training (initial, practice teaching and inservice) for teachers on how to handle diverse groups of students including types of instruction, support, evaluation and feedback; dealing with local communities; and isolation where the classes are located in remote areas;

- instructional materials that permit students to work individually and without direct supervision;
- flexibility to curriculum organization. Suggestions include: a) a common timetable option that allows all the children to learn the same subject in a given timetable period, but each grade group follows its own work, according to its own work program and grade level; b) the subject stagger option, where subjects are staggered on the timetable so that grade groups learn different subjects in the same period. Subjects which require high teacher-pupil contact are matched with those requiring little; c) the subject grouping option, where subjects are presented to all grade groups together at the same time. Some subjects e.g. music, art, religious studies, and social studies lend themselves well to this option;
- physical facilities that permit division of the class into separate work groups;
- training for supervisors to better support multigrade teachers, particularly those in remote isolated areas; and
- primary curriculum documents and their associated lists of "minimum learning competencies" to be designed specifically for use by teachers in multigrade schools.

Examples:

Zambia: in sparsely populated rural communities (Lungwangwa, 1989)

- inservice training courses in multigrade teaching were developed and run by the Malcolm Moffat Teachers' Training College
- incorporation of multigrade teaching as part of regular preservice training program
- flexibility to curriculum organization was promoted, including a common timetable, the subject stagger option, and/or the subject grouping option
- in 1989, Lungwangwa conducted an evaluation of the 4 pilot schools and the College's involvement and found the following:

  Staff believed in the possibility of positive outcomes for multigrade teaching i.e. independent learning, encourages teachers to adopt pupil-centered approaches to teaching, facilitates revision of materials covered in earlier grades, increases pupil interaction, and help to promote universalizing basic education. However, several constraints were evident in actual implementation, including that multigrade teaching was not well integrated into the mainstream program for teacher preparation, multigrade teaching was of lower status and not always taken seriously as a regular method of teaching, staff at the teachers' college were overstretched to also include units of multigrade teaching, and lack of available resources limited what trainees did in their multigrade teaching practice and what happened in the school classrooms.

Colombia: Escuela Nueva - one teacher schools in sparsely populated rural areas (Colbert, Chiappe and Arboleda, 1993)

- emphasis on stronger relationship between school and community, flexible promotion mechanism adapted to the lifestyle of the rural child, student self-instruction, learning centers and multigrade teacher training. (see c.s. brief 14)

Guatemala: Nueva Escuela Unitaria in rural areas (Kraft, 1998)

- emphasis on stronger relationship between school and community, flexible promotion mechanism adapted to the lifestyle of the rural child, student self-instruction, learning centers and multigrade teacher training. (see c.s. brief 15)

Peru: one teacher schools in rural areas, predominantly in the Andean and Amazon regions (Heise, 1987; Aikman, 1994)

- emphasis on NGO led teacher training program particularly for indigenous teachers in intercultural and bilingual education

Philippines: the IMPACT system of mass primary education (followed by Malaysia – INSPIRE, Jamaica - PRIMER, Liberia – IEL and Bangladesh- IMPACT) (see c.s. brief 12)

Sri Lanka: sparsely populated rural areas in both Sinhala-speaking and Tamil-speaking areas (Ratnaike, 1987; Abhayadeva, 1989)

- emphasis on development of multigrade and multilevel teaching strategies, including a graded approach to reading.

References:

Abhayadeva, C.M. (1989). *Development of Multigrade and Multilevel Teaching Strategies.* Maharagama, Sri Lanka: National Institute of Education.

Aikman, S. (1994). "Intercultural Education and Harakmbut Identity: A Case Study of the Community of San Jose in Southeastern Peru", unpublished PhD thesis, University of London.

Colbert, V. Chiappe, C. and Arboleda, J. (1993). "The New School Program: More and Better Primary Education for Children in Rural Areas in Colombia" in Levin, H.M. and Lockheed, M.E. *Effective Schools in Developing Countries*, London: Farmer Press.

Collinwood, I. (1991). *Multiclass Teaching in Primary Schools: A Handbook for Teachers in the Pacific.* Western Samoa: UNESCO Pacific.

Heise, M. (1987). "Proyecto de Educacion Bilingue Bicultural para los Ashaninka del Rio Tambo" in *Shipihui*, No. 30, pp 213-220, Lima.

Kraft: R. (1998) *Rural Educational Reform in the Nueva Escuela Unitaria of Guatemala.* Washington DC: Academy for Educational Development.

Lesotho- District Resource Teachers, Senior Resource Teachers and Mathot, G. (1990) "Handbook for Multi-standard Teaching" Maseru: Primary Inservice Education Programme.

Little, A. (1995). *Multi-grade Teaching: A Review of Research and Practice.* Serial No. 12. London: Overseas Development Administration.

Lunwangwa, G. (1989). *Multigrade Schools in Zambian Primary Education: A Report on the Pilot Schools in Mkushi District*, SIDA Educational Division Documents, No. 47 Stockholm: SIDA.

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press

Pratt, C. and Treacy, K. (1986). "A Study of Student Grouping Practices in Early Childhood Classes in Western Australia Government Primary Schools". Australia: Education Department of Western Australia, Cooperative Research Series No. 9.

Ratnaike, J. (1987). *Report of the Mission to Sri Lanka UNICEF Assisted Education Projects*, Bangkok: UNICEF

Rowley, S. D. Jr. (1992) *Multigrade Classrooms in Pakistan: How Teacher Conditions and Practices Affect Student Achievement.* MA: Harvard University, Graduate School of Education, Unpublished Ed.D. dissertation.

Reaching Remote Areas: Use of Interactive Radio

Guidelines:

- There is ample research evidence that children in remote communities can receive good instruction at low cost through the use of interactive radio instruction, and it can be highly effective in overcoming certain educational constraints e.g.
  - In Nicaragua where a shortage of teachers limited the educational system, average mathematics test scores in a first grade increased from 39% to 65% after a year's broadcasting.
  - In Kenya, language arts students scored 18% higher on a standardized test than those in conventional classes.
  - In Bolivia where diarrheal death is the leading cause of infant mortality, students who listened to radio health programs answered an average of 27% more health questions correctly than students who did not.
  - In the Dominican republic in remote areas where there were no schools, children who listened to an IRI project including reading, writing, math, music, natural science and social science, scored 26% higher in math than children who were able to go to conventional schools, and slightly lower in writing – both excellent results given the option of no school at all.

- Interactive radio (IRI) is an educational methodology that actively engages learners in learning through carefully designed audio programs such as radio or cassette, and support materials such as workbooks, posters etc. IRI emphasizes active learning and meaningful interaction between the radio, the teacher and other listening students.

Examples:

Interactive radio programs have been developed with success for the following subjects:

Mathematics:	Nicaragua, Thailand, Honduras, Costa Rica, Guatemala, El Salvador, Bolivia, Cape Verde and other African portuguese speaking countries, Venezuela, Dominican Republic
Language:	Kenya and Swaziland, Lesotho, South Africa, Honduras
Community Based Education:	Dominican Republic
Adult Basic Education:	Honduras
Early Child Development:	Bolivia
Environmental soap opera:	Costa Rica

Teacher Training:	Indonesia
Science:	Papua New Guinea
Health:	Bolivia

References:

Anzalone, S. (1988). *Using Instructional Hardware for Primary Education in Developing Countries: A Review of the Literature.* Cambridge: Harvard Institute for International Development. BRIDGES Casual paper.

LearnTech. *Interactive Radio Instruction: What it is, How it works, and What is needed to get it on the air.* Washington DC: Education Development Center.

Thiagarajan, S. and Pasigna A. (1988). *Review of the Literature of the Soft Technologies of Learning.* Cambridge: Harvard Institute for International Development. BRIDGES Research Report #3.

Use of Self- Instructional Materials

Guidelines:

- Dependence on the teacher as the sole source of instruction can be reduced by the introduction of self-instructional materials which children can work through at their own pace, either individually or in small groups. Those materials which match children's different learning styles can be very effective.
- The materials are usually sequenced and presented in modules that permit even slow learners to master content in a reasonable amount of time.
- Each module includes methods for self-assessment, and the child can determine when he or she is ready to proceed to the next module.
- The role of the teacher is changed as he/she becomes more of a facilitator of learning rather than the sole source of information. Emphasis is placed on the student mastering the module material and much less time is spend actually directly teaching.

Examples:

The three examples below attempt to improve the quality of education by reducing unwanted variations in teacher coverage of the curriculum, and in teacher quality. The *radio approach* does this through a single master teacher; the *low-cost-learning approach* programs the classroom teacher's behavior using a programmed teachers' guide; and the *Escuela Nueva and Nueva Escuela Unitaria* approaches substitute a programmed text for the teacher.

The *radio approach* requires almost no preservice teacher training and could be implemented as soon as materials were made available. The *lost-cost learning approach* requires little or no training, but has provoked resistance from teachers who do not wish to be "programmed". The *Escuela Nueva and Nueva Escuela Unitaria approaches* require inservice training of teachers, but this can be done without interrupting the school year.

The *Escuela Nueva, Nueva Escuela Unitaria and lost-cost learning approaches* have the lowest infrastructure (fixed capital) costs and higher expendable material costs. The *radio approach* has high fixed capital costs unless it uses existing transmitters. Costs can also be reduced by using a generic approach to script writing. All programs require an up-front investment in a radical transformation of the curriculum, with attention to instructional design concepts.

Example 1: *Interactive Radio Instruction*: See Interactive Radio section (p. 29) for more information on the programs from Nicaragua, Thailand, Dominican Republic, Kenya, Bolivia and Honduras. These examples combine the use of interactive radio with instructional materials. When directed to schools with crowded classrooms and teachers with low levels of qualifications, interactive radio instruction is more effective than conventional instruction; students learn more in less time. Teachers are usually willing to cooperate with such radio instruction since it takes often only half an hour a day. Teachers also learn new teaching techniques by following examples modeled in the radio instruction.

Example 2: *"Low-cost learning systems"*: The term "low-cost learning systems" has been used to describe a program based on instructional design concepts that has been applied, under different names, in the Philippines, Indonesia, Liberia, Thailand, Bangladesh, Malaysia and Jamaica.

This program replaces traditional textbooks and other instructional materials with programmed instructional materials. The set of materials includes a teacher's guide with detailed, programmed instructions for the entire school year, and texts and workbooks for students. The instructional material is modularized, that is divided into relatively small units, with attention to sequencing and pacing. The material includes assessment devices. The curriculum is rewritten with attention to the learning psychology of the child.

Problems have been experienced in the implementation of this program in some countries. Low skilled teachers welcomed the material, but teachers with more skills resisted learning the new approach which can reduce their autonomy and freedom to innovate. In Thailand the program was adopted but then slowly abandoned. In learning from these lessons, perhaps a combination of programmed materials used in conjunction with more flexible teaching strategies could be applied where appropriate with experienced teachers.

Costs for the entire package ranges between US$2 to US$23. A more useful comparison: low cost learning system materials cost less than half the cost of conventional materials. In the Philippines, for example, the conventional package of materials cost $47, the low cost package $23. The cost savings of the low cost system are most clear with respect to teacher/pupil ratios. The optimal class size of the low cost system in Liberia was estimated at 60 students. This then lead to substantial savings when compared to the conventional approach.

Example 3: *The Escuela Nueva* (Colombia) and *Nueva Escuela Unitaria* (Guatemala) examples combine the instructional design and programmed instruction concepts of the interactive radio programs and low-cost learning systems, with a re-organization of the structure of the primary school. Teachers are required to spend more time working in these schools, designing new materials and new activities for students. But it has also generally lead to higher levels of job satisfaction because teachers feel more like professionals. See case study briefs numbers 15 and 16.

References:

Anzalone, S. (1988). *Using Instructional Hardware for Primary Education in Developing Countries: A Review of the Literature.* Cambridge: Harvard Institute for International Development. BRIDGES Casual paper.

Kraft: R. (1998). *Rural Educational Reform in the Nueva Escuela Unitaria of Guatemala.* Washington DC: Academy for Educational Development.

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press. (Much of the text is excerpted from this reference)

Rugh, A. and Bossert, H. (1998). "Escuela Nueva in Colombia" in *Involving Communities: Participation in the Delivery of Education Programs*. Washington DC:ABEL/USAID.

Schiefelbein, E. (1991). *In search of the school of the XXI Century: Is the Colombian Escuela Nueva the right pathfinder?* UNESCO/UNICEF

Thiagarajan, S. and Pasigna A. (1988). *Review of the Literature of the Soft Technologies of Learning*. Cambridge: Harvard Institute for International Development. BRIDGES Research Report #3.

Supplementary Reading Materials

Guidelines:

- The importance to the educational process of access to a wide variety of reading materials is widely recognized. Such access:
  - develops the ability to read and extends vocabulary
  - develops a teaching force which is capable of moving beyond the confines of set books and textbooks
  - supplements and enriches work done by pupils in the classroom
  - encourages independent access to information and arouses the interest of pupils in matters outside the curriculum
  - provides training in the use and retrieval of information, a skill which is essential for higher education and lifelong learning

- The establishment of school libraries has been the traditional and preferred solution to providing access to supplementary reading material. These not only have the capacity to acquire, organize and make general reading materials available for the use of teachers and school pupils, but can also organize collections of multiple copies of textbooks for loan when purchase is not possible.

  However, the majority of schools in developing countries still do not have school libraries. Where there is some semblance of a school library, it is often no more than a few shelves of outdated and worn out material, inadequately staffed and thus marginal to the teaching-learning process.

- There are alternative ways though to get additional reading materials to students. The section below concentrates on some initiatives tried out in Africa.

  Alternative one: set up community resource centers which aim to provide reference and referral services to the whole community. These centers are often located in schools and tend to be mostly used by school children and their teachers. Examples are found in Botswana and Zimbabwe, South Africa has Learning and Education Centers, Ghana has its Community Libraries Project.

  Alternative two: set up teacher resource centers that serve a number of schools and stock a variety of textbooks both at the teacher and pupil levels, reference books and sets of books for use in the classroom (see cautions stated under the specific topic of Teacher Resource Centers). Classroom libraries and book box libraries can be a part of these centers. Examples are found in Mozambique, Namibia and South Africa.

  Alternative three: NGOs rather than government are providing support in the provision of reading materials. Examples are the Ghana Book Trust, READ in South Africa, Bibliotheque-Lecture-Developpement in Senegal.

Lessons learned:

- Whatever the modality, teachers must receive training in teaching with books and how to develop a better reading environment in their schools and communities, and be heavily committed to a book-based approach rather than a "chalk and talk" approach to teaching.
- Teachers themselves must get used to having and using books so they can pass these skills onto their students and not be frightened of books.
- The READ program in South Africa was seen to be the most successful of the examples above because it gives as much emphasis on training as it does on the provision of materials: and this contributes greatly to the effectiveness of the classroom library modality. Courses are provided at leadership, primary and high school levels, with as many follow-up sessions and workshops at the district levels as are required. They concentrate on moving teachers from rote learning to the child centered approach and on the development of professional skills, like those of language. The approach is resource-based and there are also courses in materials development, encouraging teachers to write new materials together with their pupils. Supervisors often act as resource teachers coming into the teacher's classrooms and teaching/working with teachers in their actual classrooms with the reading materials.
- Teachers need to be involved in the selection of reading materials.
- The endorsement, policies and active support from ministries of education are needed for the provision of learning resources. One way to give official recognition to library and book provision and to motivate teachers is to certify courses taken by teachers. School timetables need to have provision for library/reading periods. Transport is needed to help teachers visit resource centers to exchange books. Release time needs to be made to allow staff training. Teacher-leaders and library advisers need to be provided with adequate time and materials to work with classroom teachers. School principals need to support the use of books and assist teachers to be better at using books with their pupils. Mutual support from peers is needed. Evaluation needs to be built into the program.
- On the spot accessibility promotes greater use of resources, independent learning and the reading habit. In this respect the classroom library provides the best accessibility, as happens in the READ classroom libraries. These libraries tend to have a minimum of 60 books (around 1:7 per pupil). Fast readers are catered for by borrowing from a library serving the next higher class in the school. Each library is carefully selected and graded so that it meets the demands of the curriculum. READ also develops and publishes its own books – story books, picture story packs to encourage making up stories and theme packs over the curriculum.
- While classroom libraries are often not sufficient to teach all library skills, they provide a stepping stone to larger collections.
- The classroom library seems the most effective in relation to costs and requires no special premises or equipment.
- Book boxes are a very economical way of providing books. They are especially effective where schools have no infrastructure and no access to other sources of information. But without sufficient training of teachers in promoting the taste for and habit of reading, the educational benefits are

not satisfactory. The number of books available and their accessibility to readers is also limited.

- NGOs are an important source for book provision and teacher support. They are often able to tap into funding sources not easily available through government to allow this assistance. However, governments must still continue to take their share of the responsibility to provide resources.
- There is a need to build up a viable domestic publishing industry to produce relevant material, in sufficient quantities at realistic prices. Domestic commercial publishing is more likely to produce locally relevant books than international publishers.
- There is also a need to pay attention to the wider literary environment. Cultural and media activities ranging from library development, radio programs, children's books, and support to writer's unions and publishers associations need to be supported.

Examples:

Kenya:	Teacher Advisory Centers
Ghana:	School library services
Lesotho:	Teacher Resource Networks (see c.s brief 3)
Mali:	School libraries
Mozambique:	Book box libraries
South Africa:	Classroom libraries
Tanzania:	School library services

References:

Rosenberg, D. (Ed.) (1998). *Getting Books to School Pupils in Africa: Case Studies from Ghana, Tanzania, Mali, South Africa, Mozambique and Kenya.* Series No. 26. London:DFID.

Stridsman, M. (1998). "Supporting Educational Materials in Developing Countries". In *Educational Publishing in Global Perspective: Capacity Building and Trends*, S. Sosale (ed.). Washington DC: The World Bank.

Language of Instruction

Guidelines:

- While the debate is sometimes mixed, the research literature tends to show that:
  - Children require at least 12 years to learn their first language
  - Children do not learn second languages more quickly and easily than adults
  - Older children and adolescents are mores skilled than younger children in learning a second language.
  - The development of the child's first language with its related cognitive development is more important than more exposure to a second language.
  - Children in school settings need to learn academic language skills, as well as social communication skills.
  - Children learn a second language in different ways, depending on their culture, their group, and their individual personality.
- There are a range of models used in programs throughout the world. They can be classified into four general types: submersion in the second language, with no support from the first language; some mother tongue instruction along with more instruction in the second language; more mother tongue instruction along with less instruction in the second language; and three-tier instruction , with instruction successively in the mother tongue, a regional or group language, and the national language.
- Development of the mother tongue is critical for cognitive development and as a basis for learning the second language.
- Teachers must be able to understand, speak, and confidently use the language of instruction, whether it is their first or second language.
- Parental and community support and involvement are essential to all successful programs.
- Development costs for mother tongue programs are not available in ways that would make the information generalizable to other programs. Recurrent costs are about the same for bilingual programs as for traditional programs.
- Cost benefit calculations can be estimated in terms of cost savings to the education system and improvements in income from additional years of schooling. Both types of calculations are possible in situations where data are available.

Examples:

From countries where there are no or few mother tongue speakers of the language of wider communication:

Haiti: Creole speaking students in both public and private schools, learning in grades 1-4 through their first language (Creole) acquired about as much knowledge in the second language (French) as those who had been exposed only to the second language.

Nigeria: Yoruba-speaking students learning in grades 1-6 in their first language (Yoruba), outperformed their peers, who had been learning in only grades 1-3 in that first language, on all tests of achievement in the second language (English).

The Philippines: Tagalog-speaking students outperformed in the two languages of the bilingual education policy (Tagalog and English) those students who did not speak Tagalog in their homes.

From a country where there are some mother tongue speakers of the language of wider communication:

Guatemala: By grade 4 students who have studied in their first language (a Mayan language) achieve higher scores in tests given in the second language (Spanish) than their Mayan-speaking peers who have studied only in Spanish.

And from countries where there are many mother tongue speakers of the language of wider communication:

Canada: Students from the English speaking majority language group in bilingual immersion programs outperform their peers in traditional programs in the learning of the second language, French.

New Zealand: Some English speaking ethnic Maori students, are receiving preschool and primary school education in Maori as an attempt to preserve and revitalize the Maori language and culture.

USA: Navajo students learning throughout their primary school in their first language (Navajo) as well as their second language (English), outperformed their Navajo-speaking peers who were educated only through English.

Reference:

Dutcher, N. (1994). *The Use of First and Second Languages of Education: A Review of International Experience.* Pacific Islands Discussion Paper Series No. 1. Washington DC: The World Bank.

Different Stakeholder Groups

Guidelines:

Most participatory projects involve several stakeholder groups. The examples which follow demonstrate approaches and methods through which quality coverage of education services is improved by the participation of four key stakeholder groups:

- government and education professionals
- community members
- local, national and international NGOs,
- the private sector

Government and Education Professionals

The argument for greater participation by government, project management and education officials is based on the recognition that education policies and projects will be better designed and better implemented if they are produced by those who must make them work. This includes teachers, school heads, supervisors and officials.

The failure in many countries to implement education policies is attributed in large part to the lack of national ownership. In many case, policies are the product within the international aid establishment rather than the country concerned. Hence, the rationale for the participation of as many interested parties as possible in the process of dialogue and decision-making.

Community Level

There is much research to suggest that parent and community support is especially helpful to children learning better when the following happen:

- the child comes to school healthy and prepared to learn;
- parents and community provide financial and/or material support for the school operation;
- there is frequent communication between school staff and parents;
- community members and parents assist with instruction; and
- the community has a role, with meaningful authority, in school governance.

Community participation can also contribute to broader education goals. It can improve access and build ownership, especially among disadvantaged or underserved groups; improve the quality of service and delivery; increase enrollment demand by making education relevant to the needs of the beneficiaries; build resources; and promote the practice of civil society. However, these outcomes will not automatically occur. To be effective, planners should consider carefully what they are trying to achieve by involving the community, the mode

and level of involvement, the context in which a program is to be implemented, and the resources needed to implement the activities.

The range of activities that might occur at the community level includes: research and data collection, dialogue with policymakers, school management, curriculum design, development of learning materials, and school construction.

In developing community participation and the delivery of education programs, elements to consider include:

- building trust
- providing motivational/inspirational training
- providing strong monitoring and evaluation
- responding to community concerns
- empowering local people to act
- clearly defining roles and responsibilities of partners
- harnessing traditional modes of organization
- garnering local resources
- developing productive links to education authorities
- forming and utilizing grassroots institutions to solve local education problems
- creating school management committees
- designing culturally sensitive approaches
- including a system of reflection and correction (adapted from Rugh and Bossert, 1998:12)

Community involvement activities are more likely to be sustained if the following conditions exist:

- local capacity is developed in the process
- quality issues are addressed
- technical experts are involved
- the program is later subsumed by some formal structure which will carry on the work
- program implementation is linked with local NGOs and other organizations
- a plan for regular monitoring is in place

One participatory approach to involve people at the local, district and national levels in project planning, implementation and monitoring is the following:

1. Sponsor links with an established NGO to identify communities and local leaders.
2. Sponsor training NGO staff and local leaders to serve as co-facilitators.
3. Trainers and co-facilitators work with community residents to identify community problems that are barriers to education, identify local resources, develop action plans, and select a community involvement coordinator.
4. Co-facilitators and the community involvement coordinator share village findings and action plans with district education officials.
5. Communities implement action plans, record outcomes, and evaluate results. Co-facilitators and district officials provide support.
6. Communities share outcomes and celebrate success.

7. Sponsors/leaders present program design and outcomes to other communities that want to improve education for their children. (further details of this process can be found in "Involving Communities: A Companion Guide")

Other community activities include using tools such as the Participatory Action Research (PAR) to help pupils, teachers and parents to work together in support of the educational process in their remote community. For example, pupils provided feedback on teaching to their teachers; pupils visited families to encourage girls to attend school (offering escort services where necessary) and to ask parents to send meals with their children; teachers developed peer evaluation forms to help one another improve their teaching; and parents constructed new or refurbished existing facilities. (Uganda - IEQ/USAID; Botswana, Namibia and Madagascar-UNICEF)

Members of the community might be employed to teach either students or even trainees at a training college in certain skills such as crafts, technical and vocational skills and participate in the life of the schools and/or college (see example of Sierra Leone – UNESCO, UNDP).

NGOs

NGOs often have the greatest expertise and influence in reaching the poorest communities, and in promoting the education of women, through participatory methods. As a result, various forms of collaboration can be developed e.g. between NGOs and state education authorities and, and between international and national NGOs. One notable example is the experience of the Bangladesh Rural Advancement Committee (BRAC) in primary education.

Private Sector

Private Sector involvement in vocational and higher education is now widespread and is encouraged for three reasons: as a means of ensuring that training matches the needs of employers, as a source of technical expertise, and as a source of funds. It can also be useful to support policies in schools through the provision of books, equipment and other resources.

Examples:

Kenya:	The Harambee Secondary School Movement (see c.s. brief 2)
Philippines:	IMPACT project (see c.s. brief 13)
Bangladesh:	Bangladesh Rural Advancement Committee (BRAC) schools (see c.s. brief 11)
Colombia:	Escuela Nueva (see c.s. brief 15)
Bolivia:	Fe y Alegria
Pakistan:	The Community Support Program (CSP)
The Gambia:	Participatory Research to uncover reasons for high dropout and low enrolment
Botswana:	Consultative Conferences to link village and school voices with national policymakers

Uganda: Participatory Action Research (IEQ/USAID)
Botswana, Namibia and Madagascar: Participatory Action Research (Unicef)
Sierra Leone: Using community skills to teach students (UNESCO, UNDP)

South Africa: Creating partnerships for change (see c.s. brief 7)
Tanzania: Locally based initiatives by NGOs to support school committees and strengthen their relationship with school management (Maarifa ni Ufunguo Ngo)

References:

Colletta, N. and Perkins, G. (1995). *Participation in Education.* Participation Series paper No. 001.ESD Washington DC: World Bank.

Heneveld, E. and Craig, H. (1996) "Schools Count: World Bank Project Designs and the Quality of *Primary Education in Sub-Saharan Africa*: Technical Paper 303, Africa Technical Department Series. World Bank.

Rugh, A. and Bossert, A. (1998) *Involving Communities: Participation in the Delivery of Education Programs*. Washington DC: ABEL/USAID.

ABEL Project (1999) *Involving Communities: A Companion Guide*. Washington DC: ABEL/USAID.

Increasing Efficiency Within School Facilities

Guidelines:

- Three options are most prevalent when there is a need to increase school facilities:
  - build more schools
  - rent buildings constructed for other purposes
  - make more efficient use of current structures

- Construction of more schools requires capital outlays, by either the government or the local community or some combination of the two. Renting buildings solves an immediate need, but does not develop the capital stock of the educational system. At the end of 20 years the government is still paying rent, with nothing to show for it. However, if space is only needed for a few years for certain cohorts of students to have schooling, then renting may be a good option.

- One choice to increase efficiency to get the best education for the least expense is to build small schools in low population areas. Observed results based on the work of Bray (1987) include:
  - in some areas it may be cheaper to run several small schools than one large school--- establishing large schools in rural areas increases the cost of transportation;
  - large schools become too impersonal and inefficient thereby decreasing quality and increasing administrative costs;
  - the children's fatigue from traveling long distances to large schools decreases the effectiveness of education;
  - if schools become too large, they may have to employ specialists thereby increasing costs;
  - large schools can typically operate at a lower unit cost per pupil, but the sharing of resources in a cluster system may help small schools;
  - if large schools have poor access they may need to board students thereby increasing recurrent and capital costs.

- Another alternative is to make more intensive use of existing facilities. Students can learn as much in a double shift school as in a single shift school. Multi-shift schooling is an especially helpful option for governments with increased populations and restrained budgets The critical factors are the quality of the curriculum and the quality of teaching.

  The following table shows the experience of six countries with multi-shift schooling.

Some Multi-shift Schooling Experiences

Country	Result
1. Singapore (1986)	• difficult to arrange remedial/enrichment classes due to lack of available space • double sessions effectively operated as separate institutions making it difficult to plan and run both schools efficiently • lowered sense of students belonging to the school; greater difficulty building relationships between students and teachers
2. Malaysia (1972)	• schools used for double sessions were designed for single shifts. As a result, facilities offered students more space and could be used at other times of the day
3. Chile (1974) and Venezuela	• No noted distinction between achievement level and the number of shifts offered by schools
4. Nigeria	• Double-shift schools found to have lower pass rates than in single shift schools. Reason cited was lower socio-economic status of double-shift students
5. Guyana	• Achievement within double-shift schools not adversely affected
6. Senegal (1972)	• Found double-shift school students scored higher than single-shift. Reason cited: lower student/teacher ratio increased quality of education

References:

Bray, M. (1987) *Are Small Schools the Answer? Cost Effective Strategies for Rural School Provision.* London: Commonwealth Secretariat.

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press (Much of the text is excerpted from this reference)

Improving Access

Guidelines:

Policy Options to Improve Access to Primary School		
Barriers	**Policy Options**	**Examples**
1. Space	Provide more space	Build schools; some for certain groups
	Use existing space more efficiently or equitably	Double shifts; some for certain groups
	Use alternative buildings as schools	Community buildings, mosques, rent buildings for period of cohorts of students (e.g. BRAC schools)
	Provide education at home or in alternative facilities	Distance education, self-instructional materials
2. Distance	Reduce distance to school	More schools; better use of space; education at home; safe boarding schools
	Provide safety on route to school	Transportation; chaperones; community protection
3. Cost to household	Financial or in-kind aid	No school fees; free textbooks, uniforms; scholarships; incentives to keep child in school
	Reduce opportunity costs	Change schedule to permit work; provide substitute for child's labor while in school
	Increase expected returns	Increase access to higher levels; improve outcomes to training
4. Insufficient and overworked teachers	Recruit and put into place more teachers	Lower certification requirements; improved incentives; provide local training; place teachers near home, provide additional support
	Increase workload of current teachers	Double shifts with same teachers
	Enable current teachers to manage more students	Use of programmed, self-instructional materials, peer teaching, interactive radio instruction; distance education.
5. Education not relevant to some groups	Adapt education to community expectations	Reform or complement curriculum; change materials; recruit or re-train teachers
	Change community attitudes toward schooling	Fines for non-attendance; mobilize community support & awareness campaigns
	Motivate teachers to recruit students from groups not currently enrolled	Incentives for teachers with non-traditional students

Reference: McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press.

Insufficient Numbers of Students

Guidelines:

- In some countries or regions the ratio of students to teachers, or students per classroom is below the national standard. This might be cause by low population density; declining population due to migration, the impact of HIV/AIDS, or dropping birth rates.

- When there are insufficient numbers of students, the following options might be considered.

    1. Admit students every other or third year: The opportunity to complete all six grades (in a six-year primary cycle) is generated by admitting new classes every other or every third year. If students are admitted every other year, teachers work with grades 1,3,or 5 in the first year, and grades 2,4 or 6 in the second year. In the third year, the process is repeated. In a triennial system, the first year offers grades 1 and 4, the second 2 and 5, and the third year grades 3 and 6. Other combinations might also be tried.

       This option requires teachers to stay with the same group of students for one or more years, and be able to shift from teaching grade 1 for example, to grade 2 the following year.

    2. Set up a network or cluster of schools: This option generates access to all six grades by locating lower grades in some schools, and higher grades in others. The schools with the lower primary grades are located in the least accessible areas, so that small children do not have far to travel to school. These schools "feed" children who have completed the lower grades to schools with the higher grades. These schools may be located in the center of several small schools. See specific topic on Teacher Resource Centers.

       The success of this policy depends on the quality of the school administration and on sufficient resources to permit communication between teachers in the various schools in the network. Parents often do not want to send their children away from the communities.

    3. Use multigrade teaching: Schools with small student populations can achieve efficiency in the use of resources, and offer all grades instruction by combining students at all levels in a single classroom. See specific topic Multigrade Teaching.

Examples:
Sri Lanka: School Cluster system
See sections on Teacher Resource Centers and Multigrade Teaching

Reference:

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press. (Much of the text is excerpted from this reference)

Children Coming from Conflict Situations

Guidelines:

Taken from the example of dealing with child soldiers in Save the Children programs in Liberia (more studies needed to determine general guidelines):

- Establish a transit center to provide excombitants with shelter and protection while their details to help family tracings are initiated.
- Explore ways to make constructive use of time beginning with an emphasis on recreation, sport and the introduction of small tasks.
- The combination of a more structured caring environment and an opportunity to channel energies on team sport rather than violence tends to help the children to modify their behavior, becoming more collaborative and building of their self-esteem.
- Over time, activities can become more systematized and the children offered several options: farming, learning to read and write, or training in handicrafts such as stool making. Classes can be held daily and the children encouraged to try different activities and choose their own skills and preferences.
- The teachers can possibly be largely drawn from neighboring communities, selected more for their personal qualities in dealing with a potentially confrontational situation than their formal teaching skills.
- Subsequently, "catch-up" classes can become a central part of daily activities in the transit camp. These can be developed to provide longer, more intensive learning particularly if it is evident that family tracing could potentially take months. The children would benefit from more sustained educational input if this is the case.

Reference:

White, J. and Crumpton (with analysis by R. Allen, C. Uma, P. Colenso, U. McCauley, B. Witieveen) (2000). "A chance to Start again: Rehabilitating Child Soldiers: A Case Study from Liberia" in *Towards Responsive Schools: Supporting Better Schooling for Disadvantaged Children.* Edited by Molteno, M. Ogadhoh, K. Cain, E. Crumpton, B. Serial No. 38. London: DFID.

Guidelines:

A summary of promising interventions to promote female education (Odaga & Heneveld, 1995)

DEMAND-SIDE FACTORS	POSSIBLE INTERVENTIONS
Household and community factors High direct costs of schooling High Opportunity costs of schooling Low private economic returns to girls education Chastity and sexual safety Low demand for female education	• Lower the cost of school materials • Provide transportation and uniforms • Introduce bursary, scholarship and fee waiver programs, school lunches, medical and health support such as deworming • Adjust the school calendar to accommodate household child labor requirements • Reduce the distance between school and home • Use satellite schools • Provide child care and preschool facilities • Promote labor saving technologies • Improve the legal and regulatory systems to enhance women's status • Make education curricula more responsive and relevant to livelihood and market demand • Increase community participation in schools • Construct culturally appropriate facilities • Promote more female teachers • "Secularize" Koranic schools • Launch information campaigns that engage community, religious and civil leaders • Promote adult literacy programs
SUPPLY-SIDE FACTORS	
School Level factors Enrollment and promotion policy Management: Calendar and safety Curricular Materials Methods	• Increase enrollments by lowering the enrollment age • Reduce drop-out rates; review repetition and expulsion policies • Provide child care facilities • Institute flexible hours • Improve achievement; review learning materials for gender bias, improve science and math teaching • Promote female teachers in the sciences • Establish science laboratories and school libraries • Institute tutoring and mentoring programs • Promote gender sensitivity training in all pre and inservice teacher training courses and for educational managers
Political and Institutional factors Policy on schoolgirl pregnancy, promotion of female educators, training of staff Attitude, will and commitment to empowering women and the poor Legal status of women	• Create a favorable environment to support women and the poor through policy review • Invest in the necessary structures; schools, facilities for girls, toilets, dormitories, walls • Launch information campaigns • Enhance the status of women through the regulatory process • Adopt poverty-alleviating strategies that release women and girls from the tasks of water and fuel collection for more productive activities • Improve women's access to the formal labour market

Other examples

General: Provide extension courses for girls out of school because of maternity leave to ensure that they keep up with their studies and do not fall behind their peers when they rejoin school after three months. The extension curriculum with enhanced HIV/AIDS modules will be added. Programs also for fathers-to-be who would drop out of school (UNICEF/Botswana)

Where sexual harassment is problematic, increase awareness, teacher training, life skills programs for girls, and trying to improve the relationship between the school and the community.

Where lack of school spaces/schools in remote areas means that children have to travel long distances to get an education, encourage local and school cluster-based initiatives.

Botswana: In the Botswana Girls Education Program (UNICEF), solutions to the enrolment rates, retention, progression and performance issues include:

- improving the instructional setting by conducting an educational needs assessment on repetition and dropout (RAD) children; improving relevance of the primary school curriculum; developing an email information system linking schools to district and central offices; analyzing and improving school cultures, education policy and testing; sensitizing the public and officials on gender issues country-wide and educational issues specific to RAD children;

- improving the boarding environment by creating a partnership with private sector firms to support the development of appropriate hostels; training of school personnel; using local capacities to transform the hostel environment into a quality learning center as well as a boarding facility; supporting the development of a policy on hostels;

- improving preparation for primary schooling through supporting the formulation of an early childhood care and education policy; developing community-based preschools; curriculum development; and training of staff responsible to improve the quality of the education.

The issues particular to students who would otherwise drop out due to pregnancy are addressed in the Botswana program by:

- obtaining MOE permission to pilot test the waiving of the prevailing regulations so that students can take maternity leave;
- through the "Private Sector Initiative", constructing and equipping a 60-80 place day care/preschool;
- developing pregnancy prevention policies, program and procedures;

- providing free day care for the children of the teenage girls and boys who return to school in return for working in the day care facility; and developing a parenting skills, guidance and counseling course;
- providing reproductive health services and linking all students and their babies to a local health clinic;
- instituting a supplementary mathematics and science program mainly for girls; and developing extension courses for students who are on maternity leave.

(See other examples from the UNICEF girls programs from Eritrea, Ethiopia, Benin, Guinea, Senegal, Egypt, Madagascar and Malawi)

References:

Odaga, A. and W. Heneveld (1995). Girls and Schools in Sub-Saharan Africa: From Analysis to Action. Technical Paper Number 298, Africa Technical Department. Washington DC: The World Bank.

UNICEF Girls Programs in Benin, Botswana, Eritrea, Ethiopia, Guinea, Senegal, Egypt, Madagascar and Malawi

Nomadic populations

Guidelines:

- Nomads are groups of people who travel and migrate in large or small clans in search of a means of livelihood. They travel within a community or a nation or across international boundaries (Ezomah, 1990). They can be classified in three categories: hunters and food gathers, itinerant workers, and pastoralists.

- Traditionally, children of nomads are taught by their parents, older relations and peer groups. Their teaching emphasizes survival and earning a living. Nomadic children typically assume adult responsibilities at an early age. As a consequence they may have more awareness of cultural values and their environment than do non-nomadic children. On the other hand, they may fail to gain the skills of literacy and numeracy that are sometimes more easily learned in schools.

- Several countries have moved to insure the educational rights of nomads. In 1978, the Government of Kenya developed a policy favoring Arid Zone Boarding Primary Schools for the Masai, Turkana and Somalian nomads. In 1981 Nigeria issued a statement promising educational opportunities for all citizens, both inside and outside the formal system.

Example:

Mali: Following the Sahelian drought of 1968-1974, the American Friends Service Committee and the Government of Mali cooperated in a rehabilitation project for nomadic families in the village of Tin Aicha. A school was created in 1975, with one grade and 73 students. In 1980 permanent buildings were completed.

Most nomadic families resist formal education for their children. Typically education is provided in boarding schools, distant from the family, and often staffed with teachers not familiar with the customs of the nomads. The parents of Tin Aicha, however, were enthusiastic about their school. This enthusiasm is attributed to the location of the school in the village, and to the staffing of the school with teachers from the village.

Teachers adapted the national curriculum to the requirements of the village. They placed greater emphasis on health and on the history of the nomadic people. Students were involved in agriculture and animal husbandry.

This school is one of the few in Mali in which the majority of the students are from nomadic families. Participation rates are high, and absenteeism is low.

References:

Ezomah.C. (1990). Educating Nomads for Self Actualization and Development. Geneva: International Bureau of Education.

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press. (much of the text is excerpted from this reference).

Refugee Children

Guidelines:

- A great deal has been said about the need to provide educational services to refugee children. But there have been few studies of the educational problems of refugee children, or studies of how best to resolve these problems. Most studies have focused on problems of adult refugees and the best methods of repatriation and resettlement.

- The education solutions offered for children are generally in the form of short term emergency relief, rather than long term education. Priorities tend to focus on provision of shelter and food rather than education.

- The most frequently citied problems that providers of services face are the following:
  - lack of space in the school system
  - insufficient teachers to handle the additional burden of the system
  - inadequate supply of textbooks
  - inadequate supply of other instructional materials and supplies

- These may also be problems that affect children who are citizens of the country providing the education. Problems more specific to refugee children include:
  - textbook and curriculum content are inappropriate for refugee children who come from different cultural, economic, political, or geographical contexts
  - language of instruction – should refugee children be taught in their mother tongue, the language of their country destination if that is known?
  - some refugee parents and readers resist education in another language and with another curriculum fearing that their children will lose their cultural identity

- Solutions to these problems will vary according to how long the refugees will remain in the host country:
  - if they will be permanently resettled in the host country then it may be important to begin assimilation immediately;
  - if they will be repatriated to their country of origin in a few years, it may be acceptable to provide minimal education using instructors taken from the adult refugee problem;
  - if they will be repatriated to another country, decisions about curriculum content and language of instruction should take into account characteristics of the receiving country.

Reference:

McGinn, N. and Borden, A. (1995). *Framing Questions, Constructing Answers: Linking Research with Education Policy for Developing Countries.* Boston: Harvard University Press. (Much of the text is excerpted from this reference).